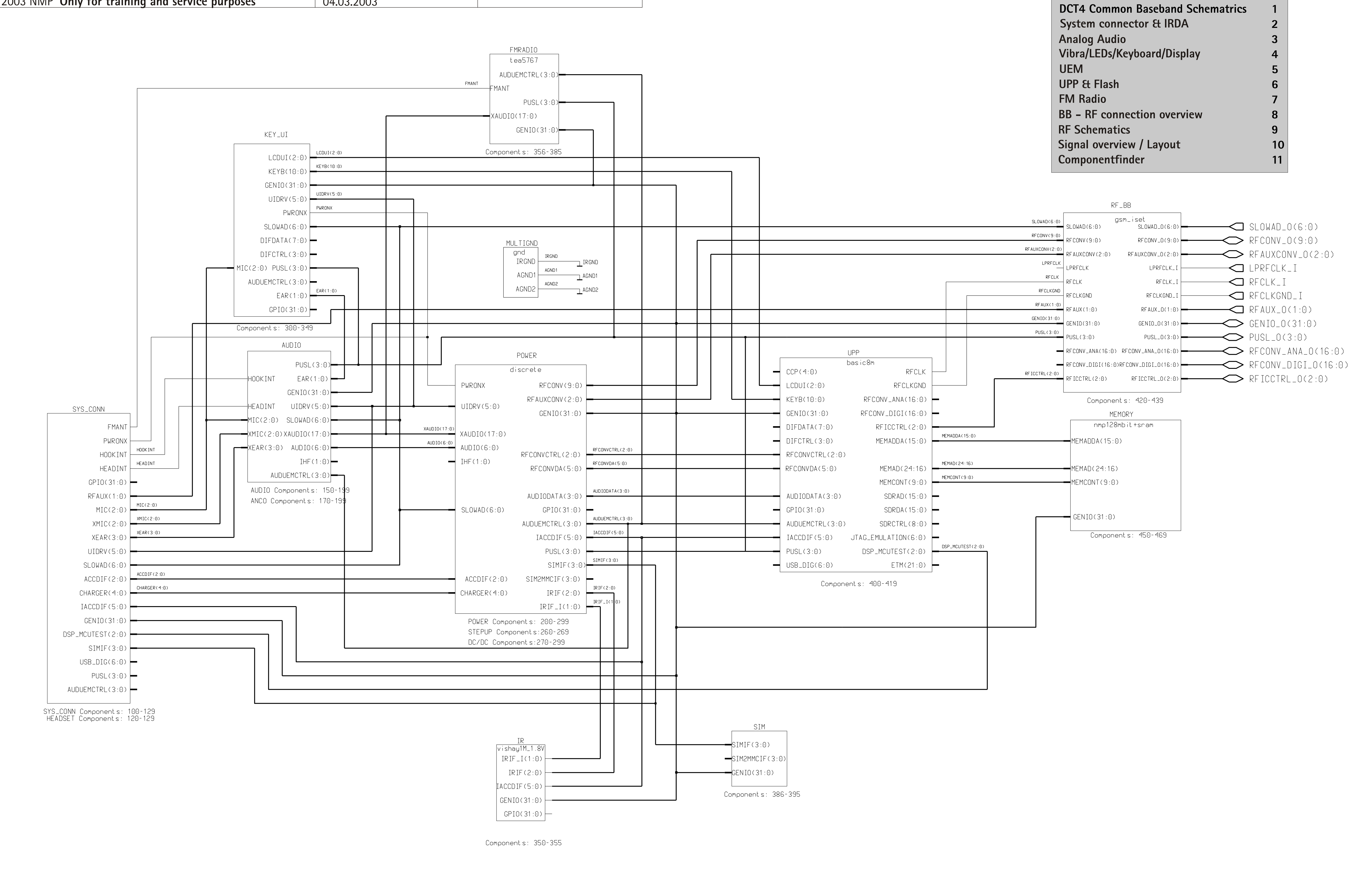
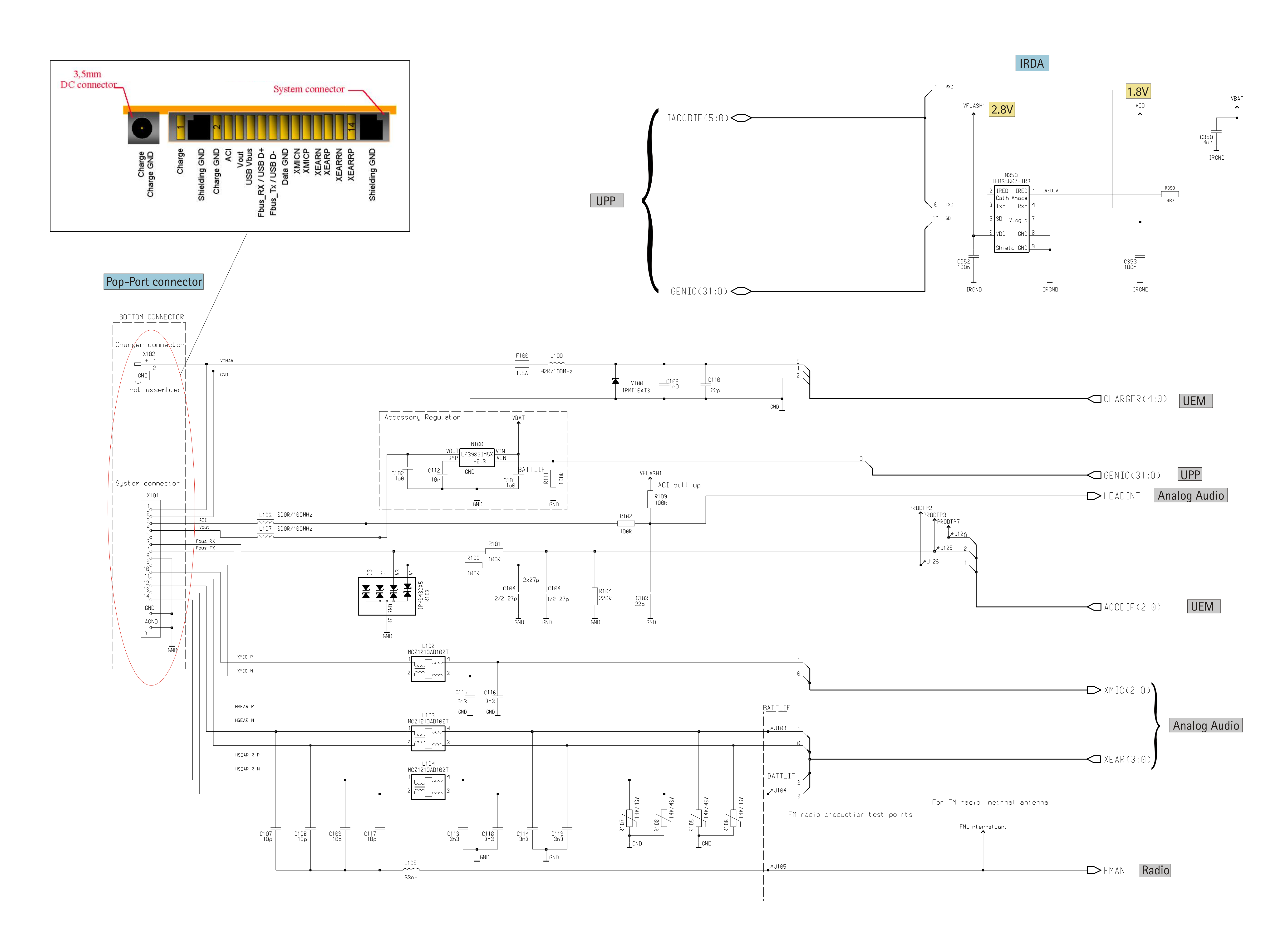
NOKIA	COMPANY CONFIDENTIAL		1(11)
Customer Care Europe & Africa	DCT4 Common Baseband	Version 3.0 Approved	
SCCE Training Group	NHL-4 (7210)	(PCB) Version_tb4_18a	
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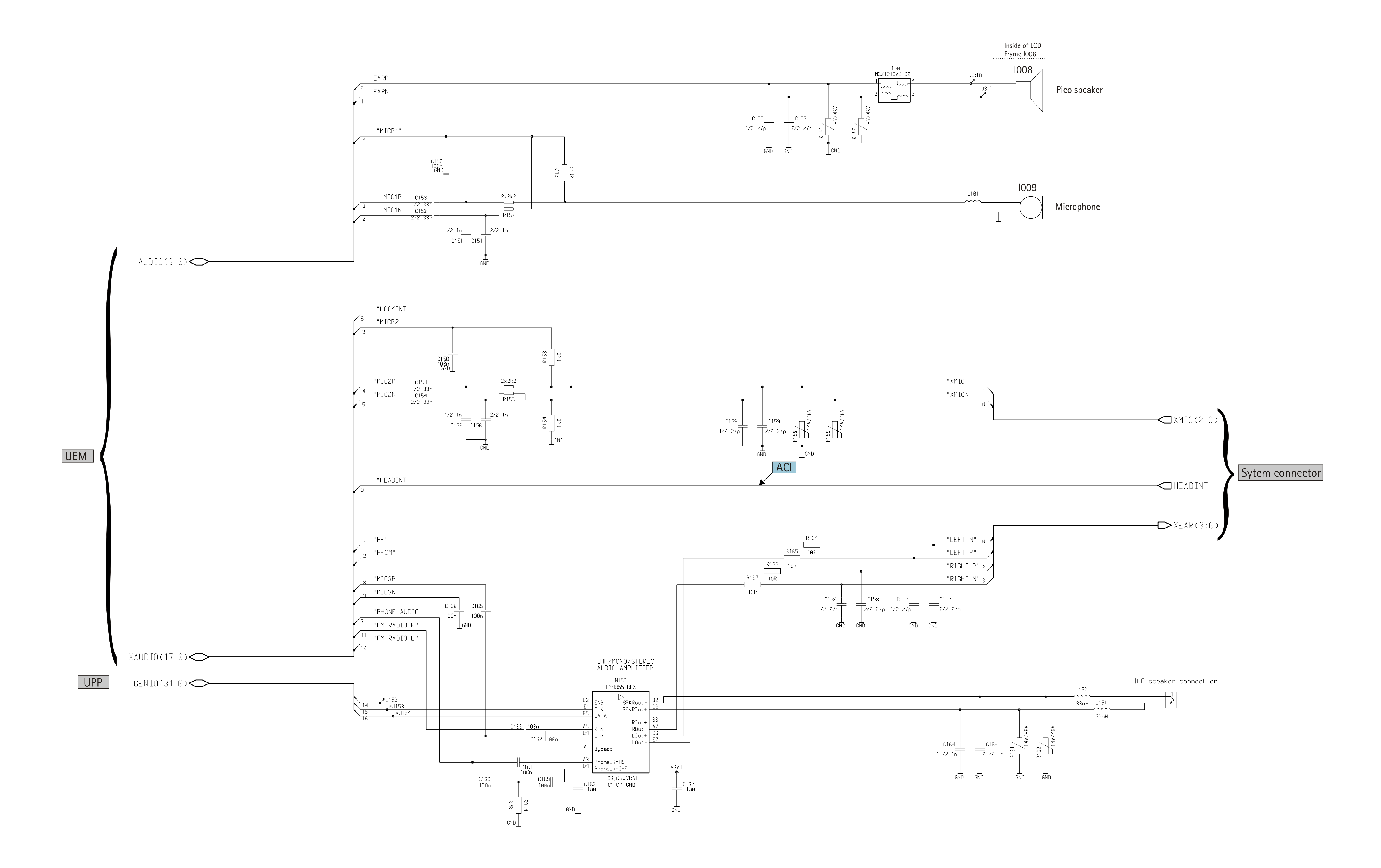
Table of Contents **Page**

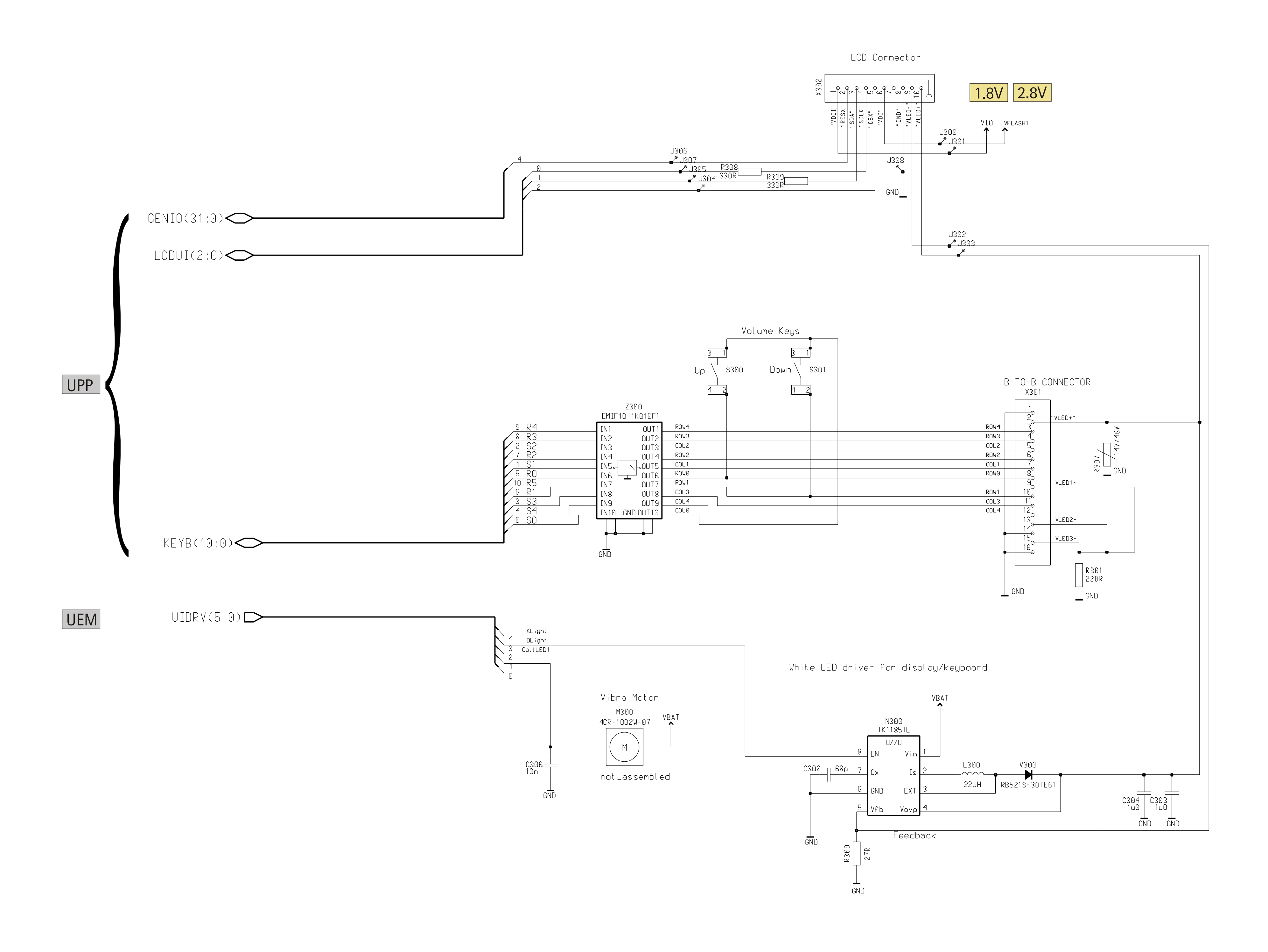


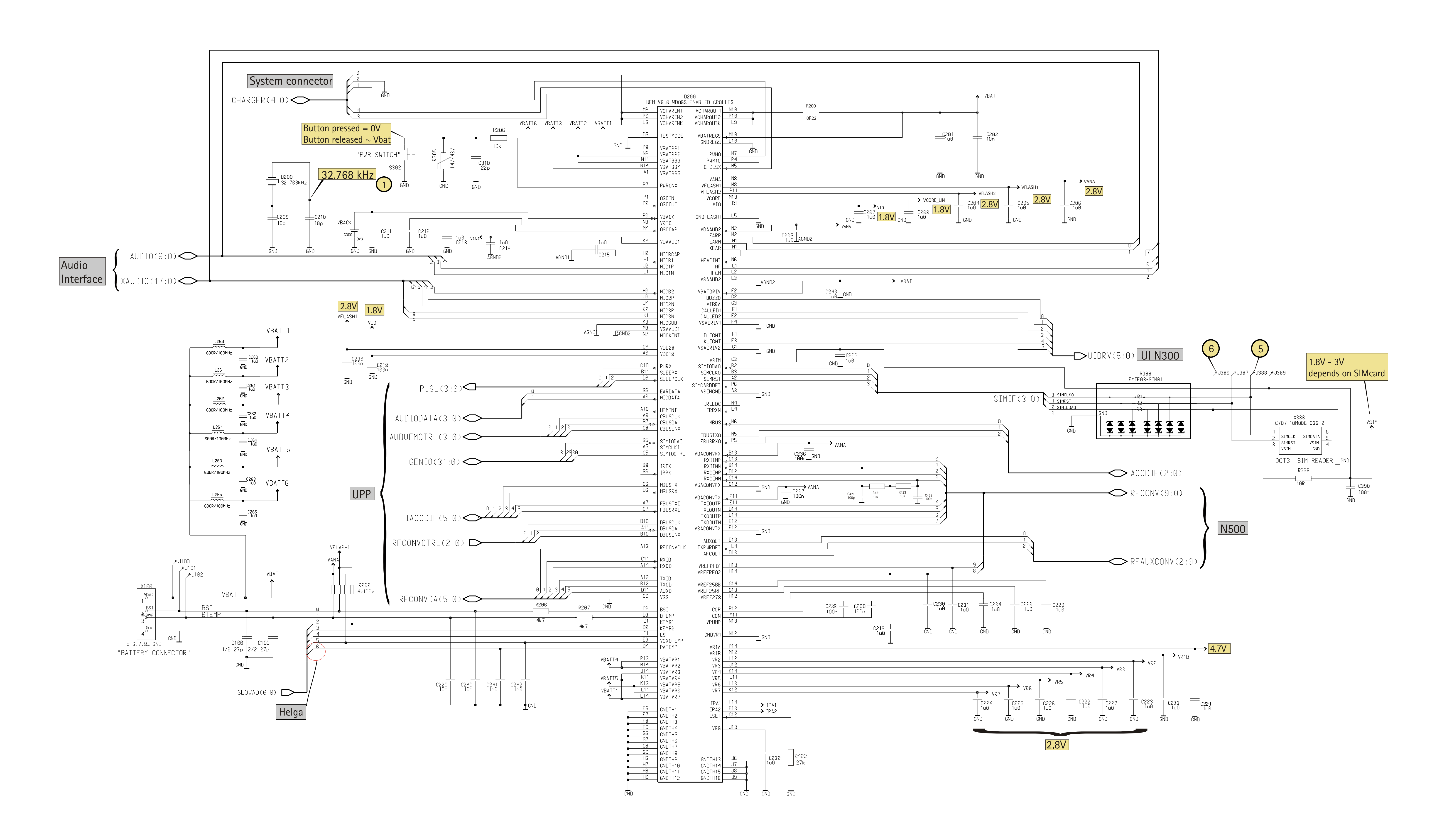


3,5mm DC connector
System connector
Charge
Charge GND
Charge
Shielding GND
Charge GND
ACI
Vout
USB Vbus
Fbus_RX / USB D+
Fbus_Tx / USB D-
Data GND
XMICN
XMICP
XEARN
XEARP
XEARRN
XEARRP
Shielding GND
Pop-Port connector
IRDA
UPP
IACCDIF(5:0)
GENIO(31:0)
1.8V
2.8V
VFLASH1
VIO
VBAT
N350
TFBS5607-TR3
IRGND
R350
C350
C352
C353
BOTTOM CONNECTOR
Charger connector
X102
not_assembled
System connector
X101
VCHAR
F100
L100
V100
C106
C110
CHARGER(4:0)
UEM
Accessory Regulator
N100
LP3985IM5X-2.8
BATT_IF
GENIO(31:0)
UPP
HEADINT
Analog Audio
ACI pull up
R109
L106 600R/100MHz
L107 600R/100MHz
R102
R101
R100
R104
C103
C104
ACCDIF(2:0)
UEM
L102
MCZ1210AD102T
L103
MCZ1210AD102T
L104
MCZ1210AD102T
XMIC(2:0)
XEAR(3:0)
Analog Audio
FM radio production test points
For FM-radio inetrnal antenna
FM_internal_ant
L105
68nH
FMANT
Radio

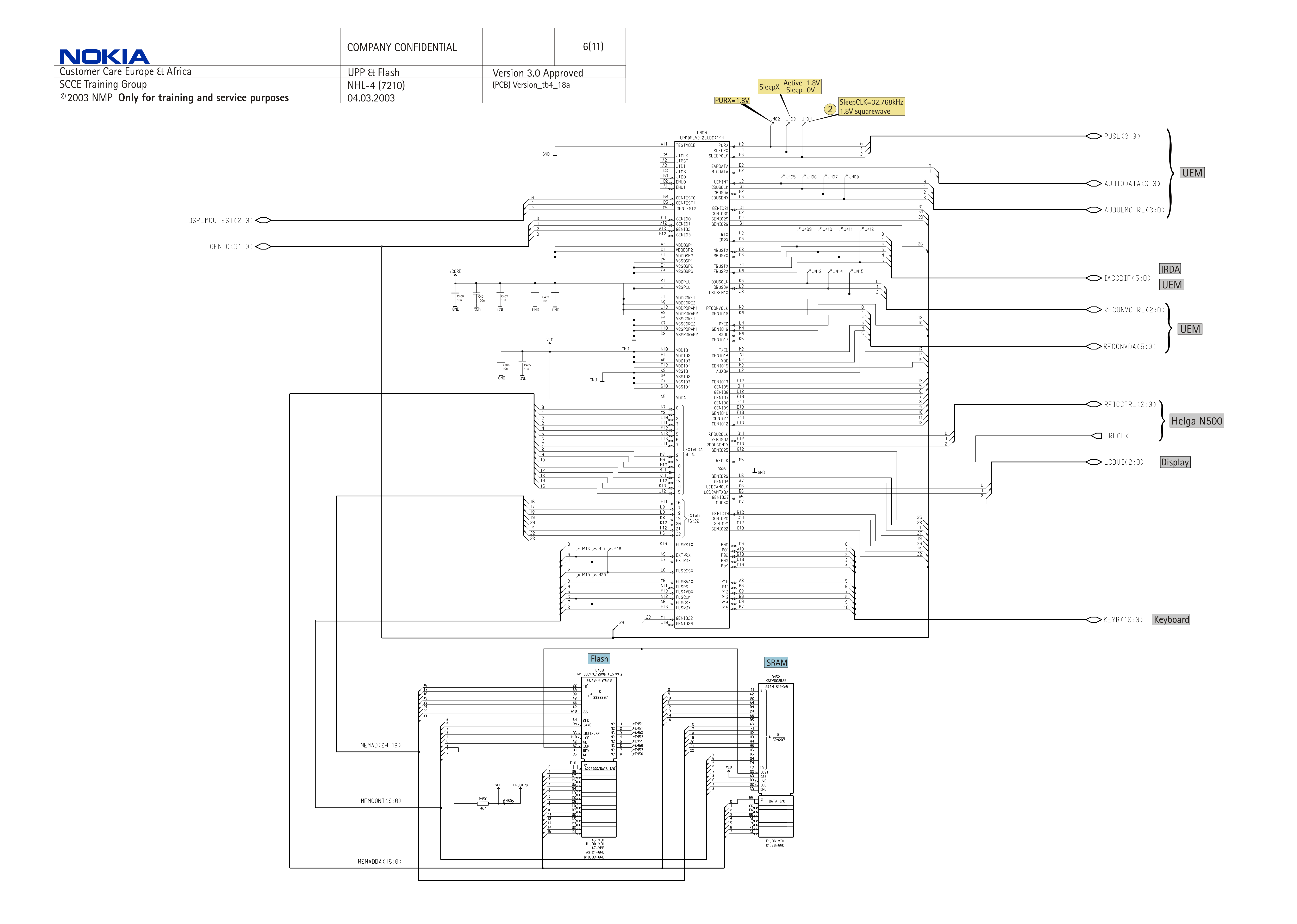
NOKIA	COMPANY CONFIDENTIAL		3(11)
Customer Care Europe & Africa	Analog Audio	Version 3.0 Approved	
SCCE Training Group	NHL-4 (7210)	(PCB) Version_tb4_18a	
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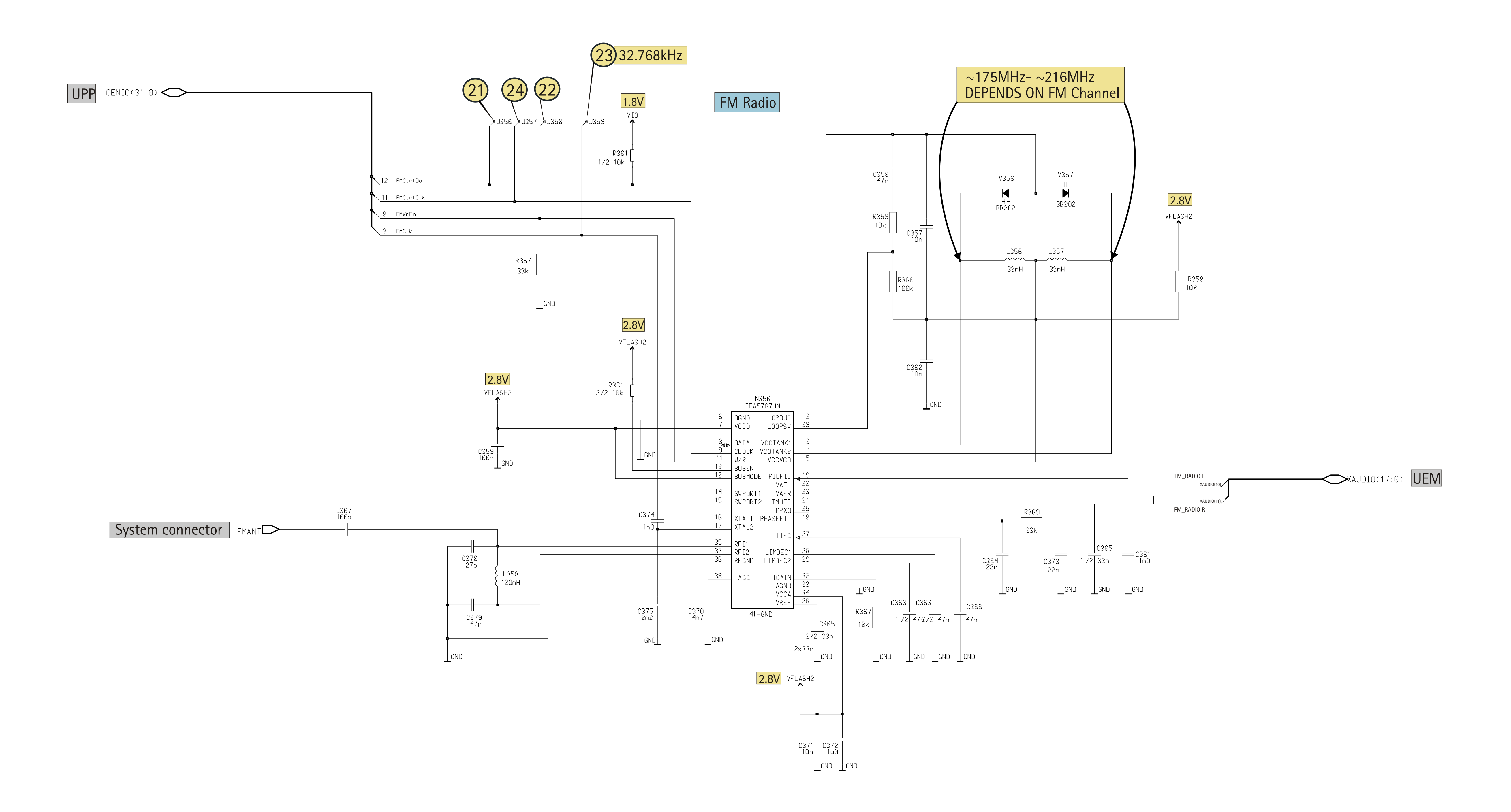



LCD Connector
X302
1.8V
2.8V
VIO
VFLASH1
GENIO(31:0)
LCDUI(2:0)
UPP
Volume Keys
Up
Down
S300
S301
B-TO-B CONNECTOR
X301
Z300
EMIF10-1K010F1
KEYB(10:0)
GND
UEM
UIDRV(5:0)
KLight
DLight
CallLED1
White LED driver for display/keyboard
Vibra Motor
M300
4CR-1002W-07
VBAT
not_assembled
C306
10n
N300
TK11851L
L300
22uH
V300
RB521S-30TE61
C302
68p
C304
1u0
C303
1u0
Feedback
R300
27R
R301
220R
R307
14V/46V

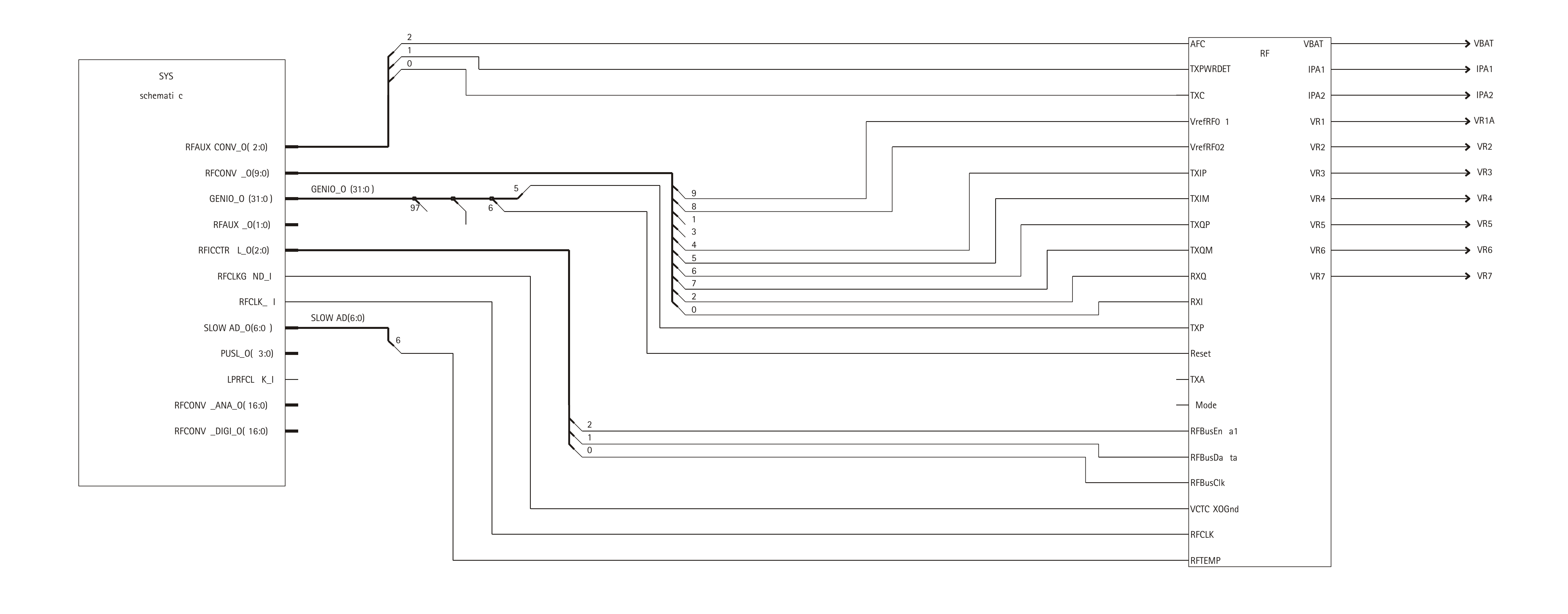


System connector
CHARGER(4:0)
Button pressed = 0V
Button released ~ Vbat
"PWR SWITCH"
32.768 kHz
Audio Interface
AUDIO(6:0)
XAUDIO(17:0)
UEM_V6.0_WDOGS_ENABLED_CROLLES
D200
2.8V
1.8V
UPP
PUSL(3:0)
AUDIODATA(3:0)
AUDUEMCTRL(3:0)
GENIO(31:0)
IACCDIF(5:0)
RFCONVCTRL(2:0)
RFCONVDA(5:0)
UIDRV(5:0)
UI N300
SIMIF(3:0)
1.8V - 3V depends on SIMcard
"DCT3" SIM READER
ACCDIF(2:0)
RFCONV(9:0)
RFAUXCONV(2:0)
N500
4.7V
"BATTERY CONNECTOR"
SLOWAD(6:0)
Helga


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Customer Care Europe & Africa
UPP & Flash
Version 3.0 Approved
SCCE Training Group
NHL-4 (7210)
(PCB) Version_tb4_18a
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04.03.2003
PURX=1.8V
SleepX
Active=1.8V
Sleep=0V
2
SleepCLK=32.768kHz
1.8V squarewave
D400
UPP8M_V2.2_UBGA144
PUSL(3:0)
UEM
AUDIODATA(3:0)
AUDUEMCTRL(3:0)
DSP_MCUTEST(2:0)
GENIO(31:0)
VCORE
VIO
IACCDIF(5:0)
IRDA
UEM
RFCONVCTRL(2:0)
UEM
RFCONVDA(5:0)
RFICCTRL(2:0)
Helga N500
RFCLK
LCDUI(2:0)
Display
KEYB(10:0)
Keyboard
Flash
D450
SRAM
D452
MEMAD(24:16)
MEMCONT(9:0)
MEMADDA(15:0)



UPP
GENIO(31:0)
21
24
22
23
32.768kHz
1.8V
FM Radio
~175MHz- ~216MHz
DEPENDS ON FM Channel
2.8V
VFLASH2
UEM
XAUDIO(17:0)
FM_RADIO L
FM_RADIO R
System connector
FMANT
N356
TEA5767HN



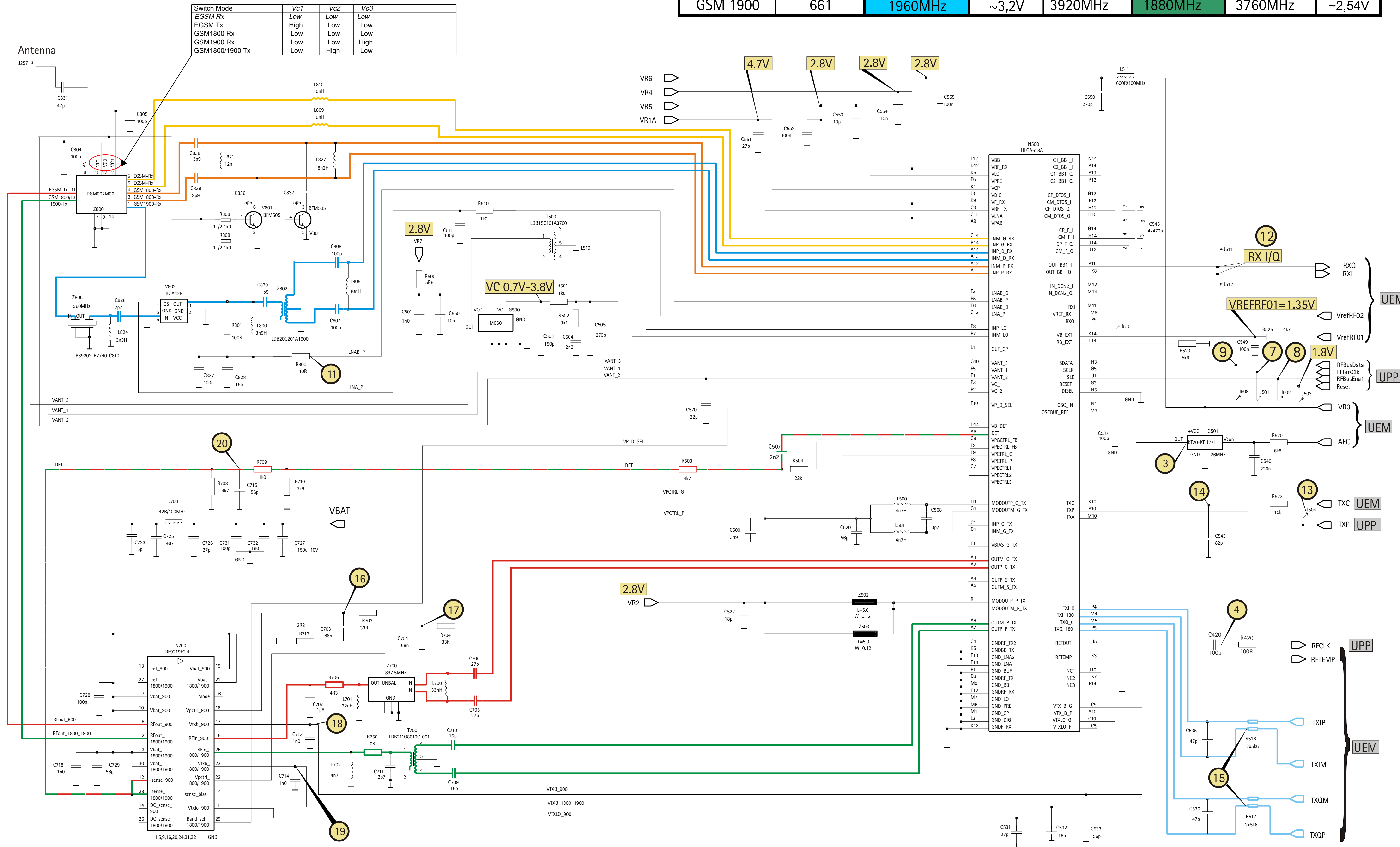
SYS
schemati c
RFAUX CONV_O(2:0)
RFCONV _O(9:0)
GENIO_O (31:0)
RFAUX _O(1:0)
RFICCTR L_O(2:0)
RFCLKG ND_I
RFCLK_ I
SLOW AD_O(6:0)
PUSL_O(3:0)
LPRFCL K_I
RFCONV _ANA_O(16:0)
RFCONV _DIGI_O(16:0)
GENIO_O (31:0)
SLOW AD(6:0)
RF
AFC
TXPWRDET
TXC
VrefRFO 1
VrefRF02
TXIP
TXIM
TXQP
TXQM
RXQ
RXI
TXP
Reset
TXA
Mode
RFBusEn a1
RFBusDa ta
RFBusClk
VCTC XOGnd
RFCLK
RFTEMP
VBAT
IPA1
IPA2
VR1
VR2
VR3
VR4
VR5
VR6
VR7
VBAT
IPA1
IPA2
VR1A
VR2
VR3
VR4
VR5
VR6
VR7

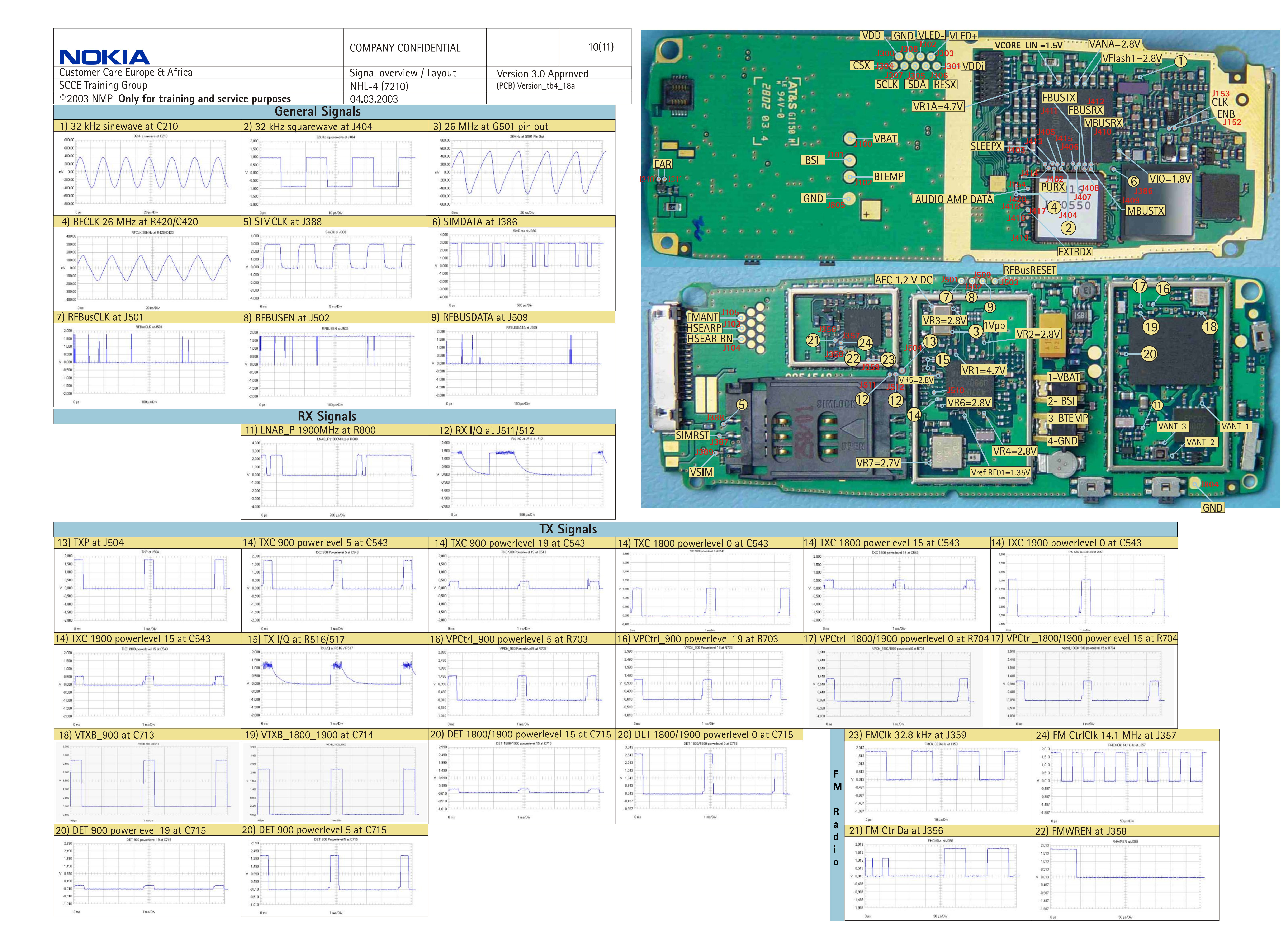
NOKIA

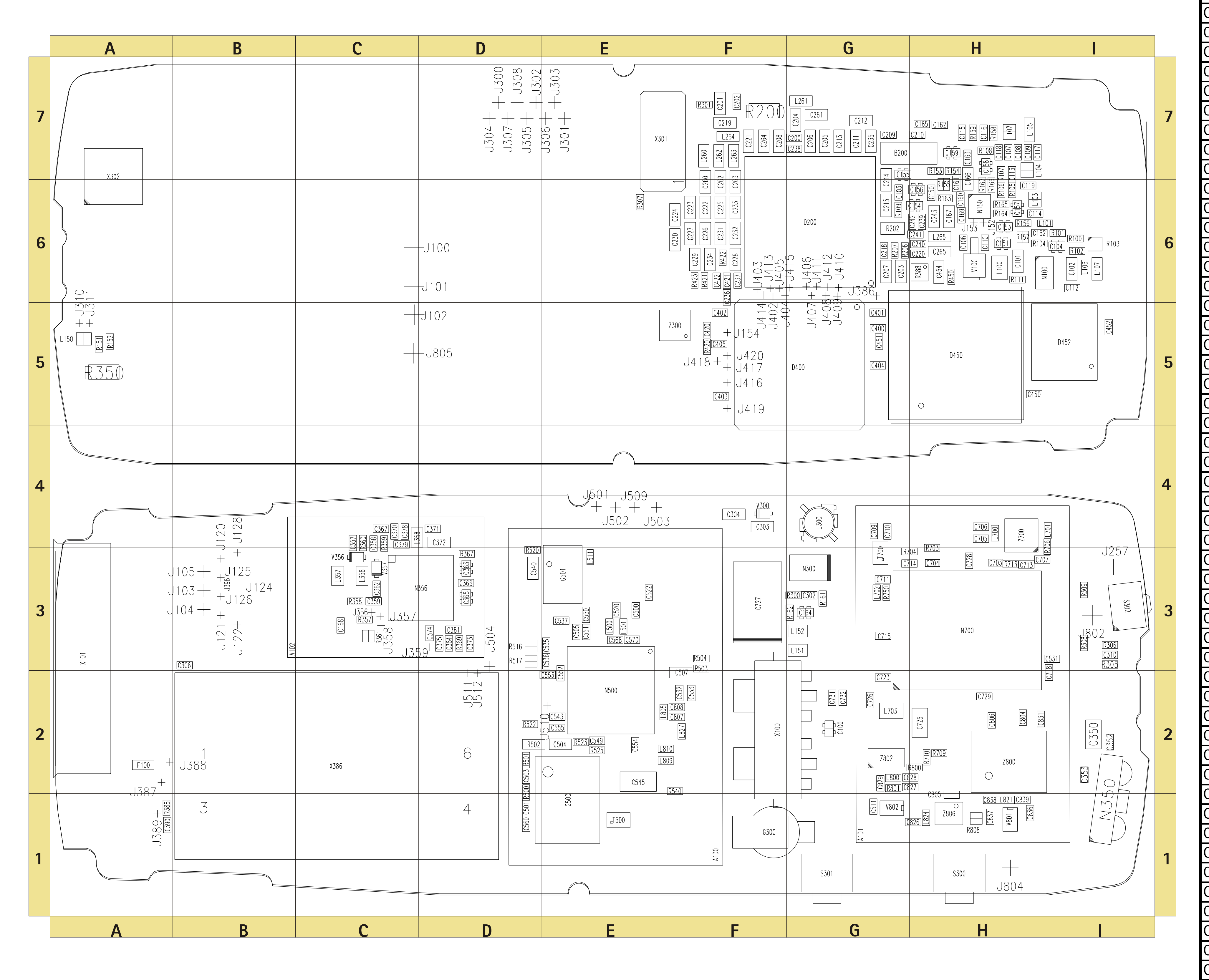
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Customer Care Europe & Africa	RF Schematics	Version 3.0 Approved
SCCE Training Group	NHL-4 (7210)	(PCB) Version_tb4_18a
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Band	Channel	RX	VC/RX	VCO/RX	TX	VCO/TX	VC/TX
GSM 900	37	942,4MHz	~2,58V	3769,6MHz	897,4MHz	3589,6MHz	~1,8V
GSM 1800	700	1842,8MHz	~2,2V	3685,6MHz	1747,8Mhz	3495,6MHz	~1,4V
GSM 1900	661	1960MHz	~3,2V	3920MHz	1880MHz	3760MHz	~2,54V




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Customer Care Europe & Africa
Signal overview / Layout
Version 3.0 Approved
SCCE Training Group
NHL-4 (7210)
(PCB) Version_tb4_18a
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04.03.2003
General Signals
1) 32 kHz sinewave at C210
2) 32 kHz squarewave at J404
3) 26 MHz at G501 pin out
4) RFCLK 26 MHz at R420/C420
5) SIMCLK at J388
6) SIMDATA at J386
7) RFBusCLK at J501
8) RFBUSEN at J502
9) RFBUSDATA at J509
RX Signals
11) LNAB_P 1900MHz at R800
12) RX I/Q at J511/512
TX Signals
13) TXP at J504
14) TXC 900 powerlevel 5 at C543
14) TXC 900 powerlevel 19 at C543
14) TXC 1800 powerlevel 0 at C543
14) TXC 1800 powerlevel 15 at C543
14) TXC 1900 powerlevel 0 at C543
14) TXC 1900 powerlevel 15 at C543
15) TX I/Q at R516/517
16) VPCtrl_900 powerlevel 5 at R703
16) VPCtrl_900 powerlevel 19 at R703
17) VPCtrl_1800/1900 powerlevel 0 at R704
17) VPCtrl_1800/1900 powerlevel 15 at R704
18) VTXB_900 at C713
19) VTXB_1800_1900 at C714
20) DET 1800/1900 powerlevel 15 at C715
20) DET 1800/1900 powerlevel 0 at C715
20) DET 900 powerlevel 19 at C715
20) DET 900 powerlevel 5 at C715
FM Radio
23) FMClk 32.8 kHz at J359
24) FM CtrlClk 14.1 MHz at J357
21) FM CtrlDa at J356
22) FMWREN at J358
VDD
GND
VLED-
VLED+
CSX
VDDi
SCLK
SDA
RESX
VCORE_LIN =1.5V
VANA=2.8V
VFlash1=2.8V
FBUSTX
FBUSRX
MBUSRX
VR1A=4.7V
CLK
ENB
VBAT
BSI
BTEMP
GND
EAR
SLEEPX
VIO=1.8V
PURX
AUDIO AMP DATA
MBUSTX
EXTRDX
RFBusRESET
AFC 1.2 V DC
FMANT
HSEARP
HSEAR RN
VR3=2.8V
1Vpp
VR2=2.8V
VR1=4.7V
VR5=2.8V
VR6=2.8V
1-VBAT
2- BSI
3-BTEMP
4-GND
SIMRST
VSIM
VR7=2.7V
VR4=2.8V
Vref RF01=1.35V
VANT_3
VANT_1
VANT_2
GND



B	C224 - F6	C452 - I5	D	J417 - F5	R104 - I6	R706 - I4
B200 - G7	C225 - F6	C454 - H6	D200 - G6	J418 - F5	R105 - H6	R107 - H7
C	C226 - F6	C500 - E3	D400 - G5	J419 - F5	R106 - H6	R709 - H2
C100 - G2	C227 - F6	C501 - D1	D450 - H5	J420 - F5	R108 - H7	R710 - H2
C101 - H6	C228 - F6	C503 - D2	D452 - I5	J501 - E4	R109 - G6	R713 - H3
C102 - I6	C229 - F6	C504 - E2	F	J502 - E4	R111 - H6	R750 - G3
C103 - G6	C230 - F6	C505 - E3	F100 - A2	J503 - E4	R151 - A5	R800 - H2
C104 - I6	C231 - F6	C507 - E2	G	J504 - D3	R152 - A5	R801 - G2
C106 - H6	C232 - F6	C511 - G1	G300 - F1	J509 - E4	R153 - H7	R808 - H1
C107 - H7	C233 - F6	C520 - E3	G500 - E1	J510 - E2	R154 - H7	S
C108 - H7	C234 - F6	C522 - E3	G501 - E3	J511 - D2	R155 - H6	S300 - H1
C109 - H7	C235 - G7	C531 - I3	J	J512 - D2	R156 - H6	S301 - G1
C110 - H6	C236 - F6	C532 - F2	J100 - C6	J802 - I3	R157 - H6	S302 - I3
C112 - I6	C237 - F6	C533 - F2	J101 - C6	J804 - H1	R158 - H7	T
C113 - H7	C238 - G7	C535 - E3	J102 - C6	L	R159 - H7	T500 - E1
C114 - I6	C239 - H6	C536 - E3	J103 - B3	L100 - H6	R161 - G3	T700 - G3
C115 - H7	C240 - H6	C537 - E3	J104 - B3	L101 - I6	R162 - G3	V
C116 - H7	C241 - H6	C540 - D3	J105 - B3	L102 - H7	R161 - G3	V100 - H6
C117 - I7	C242 - H6	C543 - E2	J120 - B3	L103 - I6	R162 - G3	V300 - F4
C118 - H7	C243 - H6	C545 - E2	J121 - B3	L104 - H7	R163 - H6	V356 - C3
C119 - H6	C260 - F6	C549 - E2	J122 - B3	L105 - H7	R164 - H6	V357 - C3
C127 - F3	C261 - G7	C550 - E3	J124 - B3	L106 - I6	R165 - H6	V801 - H1
C150 - H6	C262 - F6	C551 - E3	J125 - B3	L107 - I6	R166 - H6	V802 - G1
C151 - H6	C263 - F6	C552 - E2	J128 - B3	L150 - A5	R167 - H6	X
C152 - I6	C264 - F7	C553 - E2	J152 - H6	L151 - G3	R200 - F7	X100 - F2
C153 - H6	C265 - H6	C554 - E2	J153 - H6	L152 - G3	R202 - G6	X101 - A3
C154 - H6	C302 - G3	C555 - E2	J154 - F5	L260 - F7	R206 - G6	X301 - E8
C155 - G7	C303 - F4	C560 - D1	J257 - I3	L261 - G7	R207 - G6	X302 - A8
C156 - H6	C304 - F4	C568 - E3	J300 - D7	L262 - F7	R300 - G3	X386 - C2
C157 - H6	C310 - I3	C570 - E3	J301 - E7	L263 - F7	R301 - F7	Z
C158 - H7	C350 - I2	C703 - H3	J302 - D7	L264 - F7	R305 - I3	Z300 - F5
C160 - H6	C352 - I2	C704 - H3	J303 - E7	L265 - H6	R306 - I3	Z700 - H4
C161 - H6	C353 - I2	C705 - H4	J304 - D7	L300 - G4	R307 - E6	Z800 - H2
C162 - H7	C357 - C4	C706 - H4	J305 - D7	L356 - C3	R308 - I3	Z802 - G2
C163 - H7	C358 - C4	C707 - I3	J306 - E7	L357 - C3	R309 - I3	Z806 - H1
C164 - G3	C359 - C3	C709 - G4	J307 - D7	L358 - C4	R350 - A5	
C165 - H7	C361 - D3	C710 - G4	J308 - D7	L500 - E3	R357 - C3	
C166 - H7	C362 - C3	C711 - G3	J310 - A5	L501 - E3	R358 - C3	
C167 - H6	C363 - D3	C713 - H3	J311 - A5	L511 - E3	R359 - C4	
C168 - C3	C364 - D3	C714 - G3	J356 - C3	L700 - H4	R360 - C4	
C169 - H6	C365 - D3	C715 - G3	J357 - C3	L701 - I4	R367 - D3	
C200 - G7	C366 - D3	C718 - I2	J358 - C3	L702 - G3	R369 - D3	
C201 - F7	C367 - C4	C723 - G2	J359 - C3	L703 - G2	R386 - A1	
C202 - F7	C370 - C4	C725 - H2	J386 - G6	L800 - G2	R388 - H6	
C203 - G6	C371 - D4	C726 - G2	J387 - A2	L805 - E2	R420 - F5	
C204 - G7	C372 - D4	C728 - H3	J388 - A2	L809 - F2	R421 - F6	
C205 - G7	C373 - D3	C729 - H2	J389 - A1	L810 - F2	R422 - F6	
C206 - G7	C374 - D3	C731 - G2	J396 - B3	L821 - H1	R423 - F6	
C207 - G6	C375 - D3	C732 - G2	J402 - F6	L824 - H1	R450 - H6	
C208 - F7	C378 - C4	C804 - H2	J403 - F6	L827 - F2	R500 - D2	
C209 - G7	C379 - C4	C805 - H1	J404 - F6	N	R501 - D2	
C210 - H7	C390 - A1	C806 - H2	J405 - F6	N100 - I6	R502 - D2	
C211 - G7	C400 - G5	C807 - F2	J406 - G6	N150 - H6	R503 - F3	
C212 - G7	C401 - G5	C808 - F2	J407 - G6	N300 - G3	R504 - F3	
C213 - G7	C402 - F5	C826 - H1	J408 - G6	N350 - I1	R516 - D3	
C214 - G6	C403 - F5	C827 - H2	J409 - G6	N356 - D3	R517 - D3	
C215 - G6	C404 - G5	C828 - H2	J410 - G6	N500 - E2	R520 - D3	
C218 - G6	C405 - F5	C829 - G2	J411 - G6	N700 - H3	R522 - D2	
C219 - F7	C420 - F5	C831 - I2	J412 - G6	R	R523 - E2	
C220 - H6	C421 - F6	C836 - H1	J413 - F6	R100 - I6	R525 - E2	
C221 - F7	C422 - F6	C837 - H1	J414 - F6	R101 - I6	R540 - F2	
C222 - F6	C450 - I5	C838 - H1	J415 - G6	R102 - I6	R703 - H3	
C223 - F6	C451 - G5	C839 - H1	J416 - F5	R103 - I6	R704 - G3	